

**WHAT IS CLAIMED:**

1. An optical cross-connect device, comprising:

at least one shelf having a plurality of guide rails

5 running in parallel thereon;

a switch motherboard disposed at the rear end of said shelf;

at least one electric crosspoint switch disposed on the outer surface of said switch motherboard;

10 a plurality of switch connectors positioned on the front surface of said switch motherboard; and,

15 a plurality of optical transceiver boards mounted along said guide rails of said shelf, said optical transceiver having a transceiver connector for connecting to a different one of said switch connectors positioned on the front surface of said switch motherboard.

2. The device according to claim 1, wherein said

electric crosspoint switch is disposed at the front center

20 portion of said switch motherboard, and wherein a multiple array of said switch connectors are disposed near said electric crosspoint switch.

3. The device according to claim 1, wherein said electric crosspoint switch and said switch connectors are connected through an impedance signal line that is formed on said switch motherboard.

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4. The device according to claim 1, wherein said guide rails enable said optical transceiver boards to be vertically mounted on said shelf.

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5. The device according to claim 1, wherein said guide rails maintain a predetermined interval distance between said optical transceiver boards.

6. The device according to claim 1, wherein each of said optical transceiver boards is slidably mounted along said guide rail of said shelf to enable said optical transceiver board to be electrically coupled to one of the plurality of said switch connectors.

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7. An optical cross-connect device, comprising:

at least one shelf having a plurality of guide rails running in parallel thereon;

5 a switch motherboard disposed at the rear end of said shelf;

at least one electric crosspoint switch disposed on the outer surface of said switch motherboard;

at least one array of switch connectors disposed on the outer surface of said switch motherboard; and,

10 a plurality of optical transceiver boards slidably mounted along said guide rails of said shelf to enable said optical transceiver board to be electrically coupled to one of the plurality of said switch connectors.

15 8. The device according to claim 7, wherein said electric crosspoint switch is disposed at the front center portion of said switch motherboard.

9. The device according to claim 7, wherein said 20 electric crosspoint switch and said switch connectors are connected through an impedance signal line that is formed on said switch motherboard.

10. The device according to claim 7, wherein said guide rails enable said optical transceiver boards to be vertically mounted on said shelf.

5        11. The device according to claim 7, wherein said guide rails maintain a predetermined interval distance between said optical transceiver boards.

10        12. The device according to claim 7, wherein each of said optical transceiver boards is slidably mounted along said guide rail of said shelf to enable said optical transceiver board to be electrically coupled to one of the plurality of said switch connectors.